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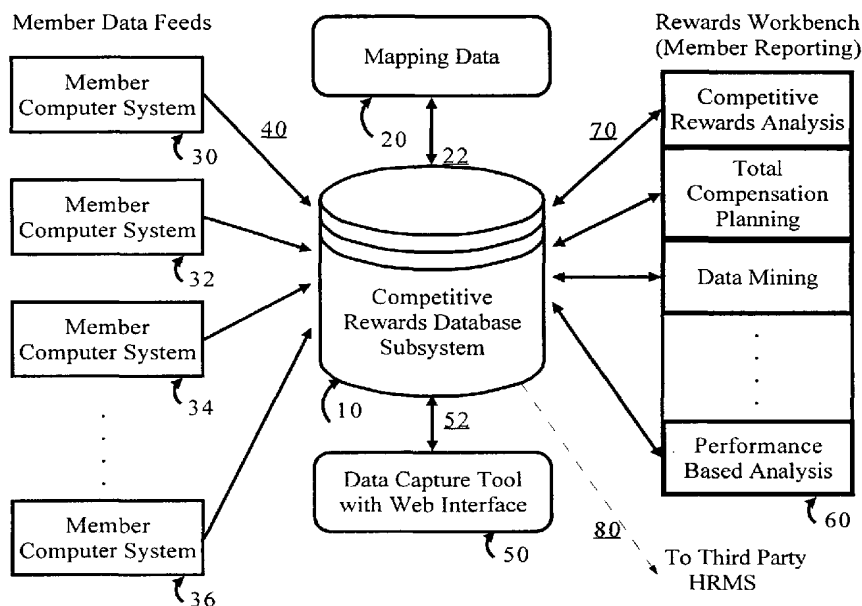
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[Continued on next page]

(54) Title: COMPETITIVE REWARDS BENCHMARKING SYSTEM AND METHOD



(57) Abstract: The invention concerns a system and method for implementing and/or administering a competitive rewards database (10). Member data is received from at least one member computer (30) via a data feed (40). The (raw) member data is automatically mapped and incorporated into the competitive rewards database (10). A data capture tool (50), preferably coupled to a data network, via a data feed (52), is operable to adjust the mapping of member data. A rewards workbench (60), preferably coupled to a data network via a data feed (70), is generally operable to query the competitive rewards database.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

COMPETITIVE REWARDS BENCHMARKING SYSTEM AND METHOD

The present invention relates to the field of computer database systems and in particular relates to a competitive rewards benchmarking system and method.

5 Many business entities find it necessary to obtain, analyze and interpret worker rewards market data to better recruit and retain workers or "talent". Often, market pressures require business organizations to identify and retain the best qualified talent available, and ensure they are properly recognized and rewarded. However, several difficulties arise in carrying out this task.

10 Some business entities benchmark worker rewards against various competitors in such areas as: salary ranges, salary increases, paid/ unpaid leave, retirement programs; medical, dental, vision care, insurance programs, alternate work schedules and the like. Effective benchmarking requires relatively large amounts of up to date and accurate data. For example, competitive rewards data is preferably gathered from multiple business
15 organizations via surveys and the like for incorporation into a database. In general, surveys are quite labor intensive to administer and can include data gathered and compiled on a local, national or global basis.

Competitive rewards data can be compiled in-house or can be obtained from a variety of sources (out-sourced). A typical competitive rewards database contains: base
20 salary information, incentives and total cash compensation as well as other factors such as use of overtime, stock plans and cash awards (like performance bonuses and profit sharing). Reports generated from such data can contain global or national salary information as well as breakouts based on numerous criteria, including sales revenue, geographic region, industry type, company size and the like.

25 Often, access to out-sourced data requires a business entity to pay a fee and also commit at least a portion of its resources to compile and submit its data regarding its workers. The preparation and submission of this information is also quite labor intensive. However, out-sourcing is advantageous in that the actual compilation, maintenance and administration of the database are handled by a third party.

30 The consistency and accuracy of the compiled data can be affected by various factors. For example, various worker roles may not be defined consistently between business organizations. The geographic location of various businesses may affect the magnitude and form of worker compensation packages. Country specific rewards and

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translating across currencies and cultures can add further inconsistencies in the data. Survey inconsistencies may also affect the accuracy of the gathered data.

What is needed in the art and provided by the invention are improved systems and methods for providing current competitive rewards data.

Summary of the Invention

The invention concerns a system and method for implementing and/or administering a competitive rewards database. Member data is received from at least one member computer via a data feed. The (raw) member data is automatically mapped and
5 incorporated into the competitive rewards database.

In a preferred embodiment, the competitive rewards database contains at least one of base pay data, long term incentive pay data and annual incentive pay data. Other data elements can include any human resource management system data element, incentive data, perquisite data and/or benefit plan provision data. The competitive rewards
10 database can also contain at least one calculated data value.

A preferred aspect of the invention is directed to a data capture tool operable to adjust the mapping of member data. Preferably, the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

15 Another aspect of the invention is directed to a rewards workbench operable to query the competitive rewards database. Preferably, the rewards workbench is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database (e.g., compiled statistics summarizing the data received from multiple members). In a preferred embodiment, the rewards workbench is operable
20 to automate data feeds to at least one third party human resources management system.

The invention is also directed to a competitive rewards database system. The system has a competitive rewards database subsystem having a competitive rewards database and a data communications channel. The system has mapping data for automatically mapping member data prior to incorporation into the competitive rewards
25 database. The system also includes at least one member computer system having a data feed coupled to the data communications channel.

In a preferred embodiment the system also has a data capture tool operable to adjust the mapping of member data. Preferably, the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive
30 rewards database.

Another preferred aspect of the system provides a rewards workbench operable to query the competitive rewards database. Preferably, the rewards workbench is coupled to a data network and is operable to provide remote access to at least a portion of the

competitive rewards database. The rewards workbench can optionally be operable to automate data feeds to at least one third party human resources management system.

Brief Description of the Drawings

Figure 1 is a general block diagram showing the basic components of computer system in accordance with the invention;

Figure 2 is a block diagram showing the basic components of the competitive
5 rewards database subsystem in accordance with the invention;

Figure 3 is flow chart illustrates operation of a computer system with respect to member data feeds in accordance with the invention; and

Figure 4 is an exemplary data mapping table in accordance with the invention.

10 **Detailed Description of the Invention**

Definitions

The following terms shall have, for the purposes of this application, the respective meanings set forth below.

• **Database:** means a collection of information stored for later retrieval. Traditional
15 databases are organized by fields, records, and files. A field is a single piece of information; a record is one complete set of fields; and a file is a collection of records. The term "database" is used herein in its broadest sense (i.e., a collection of information) and is not limited to any particular structure or implementation.

• **Data network:** means a group of two or more computer systems linked together in
20 data communication. The term "data network" encompasses any type of wired or wireless computer network, independent of protocol, including local-area networks (LANs), wide-area networks (WANs) and networks of networks including the an intranet, extranet and the Internet.

• **HTML:** is an acronym for Hyper-Text Markup Language, the authoring language used
25 to create documents on the World Wide Web. HTML defines the structure and layout of a Web document by using a variety of tags and attributes.

• **Link:** means an HTML element that provides a Hyper-Text link. For example an HTML element supporting the HREF attribute which specifies a Hyper-Text link to another resource, such as an HTML document, image or the like.

30 • **Server:** means a program running on a computer that provides some service to other (e.g., client) programs.

The invention concerns a competitive rewards database system and method of administration. The system is operable to receive member data from at least one member computer via a data feed and automatically map the member data prior to incorporation into the competitive rewards database. The system is preferably coupled to a plurality of member human resources management systems (i.e., computer systems) and receives automatic data feeds of raw member data on a regular basis.

The term "member computer system" as used herein refers to a member's human resources management systems (HRMS). A typical member HRMS is implemented with a proprietary software package and one or more computer. The implementation, configuration, maintenance and operation of a computer based HRMS is well known to those skilled in the art.

Figure 1 shows a block diagram of a computer system in accordance with the invention. The computer system has a competitive rewards database subsystem (associated with at least one computer) operable store data such as base pay data, long term incentive pay data and annual incentive pay data. Other data elements can include any human resource management system data element, incentive data, perquisite data and/or benefit plan provision data and the like. Mapping data provides a mechanism for automatically mapping raw member data prior to incorporation into the competitive rewards database as discussed in more detail below. Mapping data is generally coupled to the competitive rewards database subsystem as shown generally by arrow 22 (e.g., via Lan, Wan, intranet, extranet or the like).

The competitive rewards database subsystem is preferably coupled to at least one member computer system. See blocks 30, 32, 34 and 36. Data communication (e.g., data feeds) between member computer systems 30, 32, 34 and 36 and the competitive rewards database subsystem are shown generally by arrows 40. Data communications in association with database reporting functions are shown generally by arrows 70. Data communications in association with data capture tool 52 is shown generally by arrow 52. Data communications between various portions of the system are preferably carried out via a data network such as the Internet. It is understood that other data network configurations are compatible with the invention (e.g., Lan, Wan, intranet, extranet or the like). It is also understood that enhanced security can be provided via firewalls, secure servers and the like.

In the case of the Internet, data communications often traverse a series of intermediate network nodes prior to reaching the desired destination. Arrows 40, 52 and 70 do not suggest a direct physical connection between the member computer systems and the competitive rewards database subsystem and encompass typical Internet
5 communications (a connectionless, best-efforts packet-based system).

It is understood that other components may be required to fully implement communications between the member computer systems 30, 32, 34 and 36 and the competitive rewards database subsystem such as firewalls, routers, policy servers, Web servers, application servers, enterprise management systems, data communications
10 channels (e.g. communications equipment, leased data lines and the like), switches, encryption products and/or gateways and the like. Configuration of the required hardware and software to implement data communication in accordance with the invention is well known to those skilled in the art.

A data capture tool 50 is coupled to the competitive rewards database subsystem.
15 The data capture tool is preferably an Internet World Wide Web based "smart" tool to capture HR and Line Manager input on benchmark global job matches. Preferably, the data capture tool is populated with appropriate employee data (based on data in the competitive rewards database) according to reporting relationships. Line Managers can then advantageously review data for each employee they supervise.

20 A rewards workbench is 60 is coupled to the competitive rewards database subsystem. The rewards workbench is an analytic tool to access to data contained in the competitive rewards database subsystem. The rewards workbench is preferably operable to query the competitive rewards database and provide various reports relevant to competitive rewards analysis, total compensation planning, data mining and performance
25 based analysis.

The data capture tool 50 and rewards workbench 60 are preferably implemented via with one or more HTML servers hosting an Internet Web site. There are many varieties of commercially or publicly available World Wide Web server software packages which are compatible with the invention (e.g., Apache, IBM WebSphere
30 products, NETSCAPE Enterprise, Microsoft Windows IIS Server and the like) all of which can be implemented with commonly available hardware from vendors such as IBM, Hewlett Packard, Compaq, Dell, Sun and numerous others that are known to those skilled in the art.

Members wishing to access the data capture tool 50 or rewards workbench 60 will typically use a network processing device (not shown) coupled to the external data network (e.g., the Internet). Two or more network devices (e.g., a network processing device and competitive rewards database subsystem 10) as disclosed herein are

5 "coupled" so long as data communication between the devices is possible (e.g., hard wired data communication, wireless data communications and the like). Typical network processing devices include, but are not limited to, personal computers (portable or desktop), personal digital assistants (PDA), Browser phones, 2-way pagers or the like. Network processing devices also include browser software or the like for providing a

10 user interface and enabling communication with the external data network (e.g., Microsoft Internet Explorer, Netscape Communicator, mini-browsers or the like).

In the context of the Internet, the network processing device and the competitive rewards database subsystem 10 communicate via TCP/IP protocol (Transmission Control Protocol over Internet Protocol). Each is network addressable in that it has a specific IP

15 address (e.g., a 32-bit address defined by the Internet Protocol usually represented in dotted decimal notation) which is used to route data between the devices. It is also understood that other data networks using various network protocols are suitable for use in accordance with the invention.

Figure 2 shows a block diagram of the competitive rewards database subsystem

20 10. Competitive rewards database 12 is generally operable to store data acquired from the member systems. However, raw data from the member computer systems must be mapped, in accordance with mapping data 20, prior to incorporation into the competitive rewards database 12 as discussed in more detail below. Computer(s)/server(s) 14 are generally operable to communication with the member computer systems via

25 communications hardware/software 16. The interconnection of computers, servers, communication equipment and the like in accordance with the invention is well within the grasp of those skilled in the art. For example, the competitive rewards database subsystem 10 can be implemented via a Lan, Wan, intranet, extranet or the like.

Figure 3 generally illustrates operation of a computer system with respect to

30 member data feeds in accordance with the invention. Preferably, each of the member computer systems 30, 32, 34 and 36 are configured to automatically transfer raw data on a somewhat regular or periodic basis (e.g., daily, weekly, monthly...). In the alternative, the competitive rewards database system 10 can be configured to poll each of the

member computer systems. Raw data can be transferred via any communication protocol, including but not limited to HTTP, FTP, GOPHER, NEWS, NNTP, MAILTO and the like.

The invention contemplates integration with a plurality of proprietary HRMS.

- 5 Each member computer system may have a different raw data format. Preferably, each member has associated data map stored in the competitive rewards database subsystem. See Figures 1 and 2, block 20. The data map generally correlates each data element in the raw data with corresponding locations in competitive rewards database. Some of the raw data may be directly copied into the competitive rewards database. Other portions of
- 10 the raw data may be translated, scaled, re-formatted, re-calculated and/or adjusted as necessary for compatibility with the format of the competitive rewards database. Once the raw data is mapped, it is stored in the competitive rewards database.

- Figure 4 shows an exemplary portion of a data mapping table (incorporated into mapping data 20). It is generally understood that raw member data from a member's
- 15 HRMS will contain a plurality of records. Figure 4 shows the data mapping for an excerpt of a HRMS database record including information related to a single employee. In a preferred embodiment, all of the raw data is mapped to a corresponding field in the competitive rewards database. In an alternate embodiment, some of the raw data can be omitted from the competitive rewards database (e.g., employee name, social security
- 20 number and the like).

- Some portions of the raw data are simply mapped into appropriate locations in the competitive rewards database. As stated above some of the raw data may be translated, scaled, re-formatted, re-calculated and/or adjusted as necessary for compatibility with the format of the competitive rewards database. For example, some
- 25 HRMS may specify a given employee position by a text string (e.g., ASCII code). The competitive rewards database may be advantageously implemented with a plurality of numeric codes (i.e., job codes). Translation of text strings to numeric codes as well as general implementation of a data mapping table in accordance with the invention based on the foregoing disclosure is well within the scope of those skilled in the art.

- 30 In operation, each of the member computer systems transmits raw data to the competitive rewards database system. The raw data is mapped and re-formatted as necessary and is incorporated into the competitive rewards database. Data capture tool
- 50 can then be used by members (e.g., HR Managers, Line Managers) to view portions

of the competitive rewards database populated with appropriate employee data according to reporting relationships. The Manager can then review data for each employee they supervise. Preferably, menu-driven options are provided thereby enabling the Manager to “tag” employees — by function, discipline, level, and scope — and flag high-

5 performers. Preferably, on-line help is available to guide managers through the matching process. In a preferred aspect of the invention, HR and Line Managers can review and update the mapping and competitive rewards database information as part of on-going HR processes.

Thus, the invention advantageously provides an up-to-date mapping of
10 employees to benchmarks established by all members of the competitive rewards database system (e.g., function, discipline, level). This promotes Manager acceptance of market data and ensures robust, high-quality data.

Rewards workbench 60 provides members with a comprehensive analytic tool operable to access data contained in the competitive rewards database subsystem. The
15 rewards workbench is preferably operable to: query prevalence of reward practices and plan provisions, compare member reward values to specific comparator groups, develop market reference data from the competitive rewards database, model and develop base pay structure, analyze cost implications, conduct data mining analyses on member’s own data, and generate other custom real-time analyses on the competitive rewards database.
20 The generation of various reports and analysis based on competitive rewards database information is well within the scope of those skilled in the art.

In a preferred embodiment, the rewards workbench provides for the formatting and export of formatted member data for submission to surveys. This information can be automatically transmitted to a third party HRMS. See Figure 1, reference number 80.

25 Rewards workbench 60, advantageously provides direct access to a robust data source to conduct a wide range of sophisticated analyses. This improves efficiency of survey submission process by leveraging initial benchmark matching and validation efforts (using the data capture tool). Rewards workbench 60 also allows electronic feed of competitive rewards data to other specialized human resources systems.

30 It is understood that some of the data contained in the competitive rewards database is not available to all users. For example, each member preferably can access all of data contained in the competitive rewards database derived from their raw data. Each member can also access a subset of the data contained in the competitive rewards

database derived from other member raw data (e.g., compiled statistics summarizing the data received from multiple members). However, individual employee names, social security numbers, personal data, billing information are not made available to other members. In general, access to member data is restricted as needed for compliance with
5 international, federal, state and local regulations (e.g., the timing of release of new data, the level of detail of the data released, and the release of data with respect to various geographic regions).

While this invention has been described with an emphasis upon preferred embodiments, it will be obvious to those of ordinary skill in the art that variations in the
10 preferred devices and methods may be used and that it is intended that the invention may be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications encompassed within the spirit and scope of the invention as defined by the claims that follow.

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What is claimed is:

1. A method for administering a competitive rewards database comprising:
 - a) receiving member data from at least one member computer via a data feed;
 - 5 b) automatically mapping the member data for incorporation into the competitive rewards database; and
 - c) incorporating the member data into the competitive rewards database.
2. The method of claim 1 wherein the competitive rewards database contains
10 at least one of base pay data, long term incentive pay data and annual incentive pay data.
3. The method of claim 2 wherein the competitive rewards database contains at least one calculated data value.
4. The method of claim 1 further comprising a data capture tool operable to
15 adjust the mapping of member data.
5. The method of claim 4 wherein the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive
20 rewards database.
6. The method of claim 1 further comprising a rewards workbench operable to query the competitive rewards database.
7. The method of claim 6 wherein the rewards workbench is coupled to a
25 data network and is operable to provide remote access to at least a portion of the competitive rewards database.
8. The method of claim 6 wherein the rewards workbench is operable to
30 automate data feeds to at least one third party human resources management system.
9. A competitive rewards database system comprising:

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a) a competitive rewards database subsystem having a competitive rewards database and a data communications channel;

b) mapping data for automatically mapping member data prior to incorporation into the competitive rewards database; and

5 c) at least one member computer system having a data feed coupled to the data communications channel.

10 10. The system of claim 9 wherein the competitive rewards database contains at least one of base pay data, long term incentive pay data and annual incentive pay data.

11. The system of claim 10 wherein the competitive rewards database contains at least one calculated data value.

15 12. The system of claim 9 further comprising a data capture tool operable to adjust the mapping of member data.

20 13. The system of claim 12 wherein the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

14. The system of claim 9 further comprising a rewards workbench operable to query the competitive rewards database.

25 15. The system of claim 14 wherein the rewards workbench is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

30 16. The system of claim 14 wherein the rewards workbench is operable to automate data feeds to at least one third party human resources management system.

17. A competitive rewards database system comprising:
a) a competitive rewards database subsystem having a competitive rewards database and a data communications channel;

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b) mapping data for automatically mapping member data prior to incorporation into the competitive rewards database;

c) at least one member computer system having a data feed coupled to the data communications channel;

5 d) a data capture tool operable to adjust the mapping of member data; and

e) a rewards workbench operable to query the competitive rewards database.

18. The system of claim 17 wherein the competitive rewards database contains at least one base pay data, long term incentive pay data and annual incentive pay
10 data.

19. The system of claim 18 wherein the competitive rewards database contains at least one calculated data value.

15 20. The system of claim 17 wherein the data capture tool is coupled to a data network and is operable to provide remote access to at least a portion of the competitive rewards database.

21. The system of claim 17 wherein the rewards workbench is coupled to a
20 data network and is operable to provide remote access to at least a portion of the competitive rewards database.

22. The system of claim 17 wherein the rewards workbench is operable to automate data feeds to at least one third party human resources management system.
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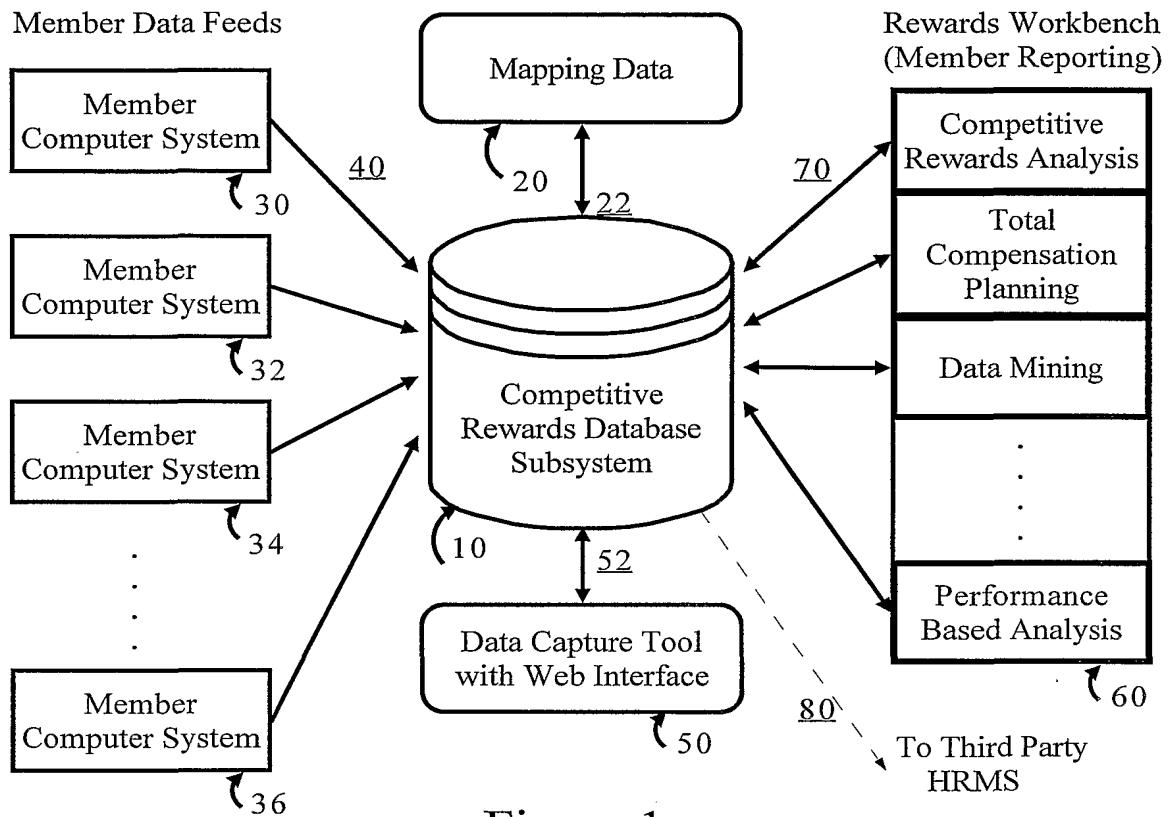
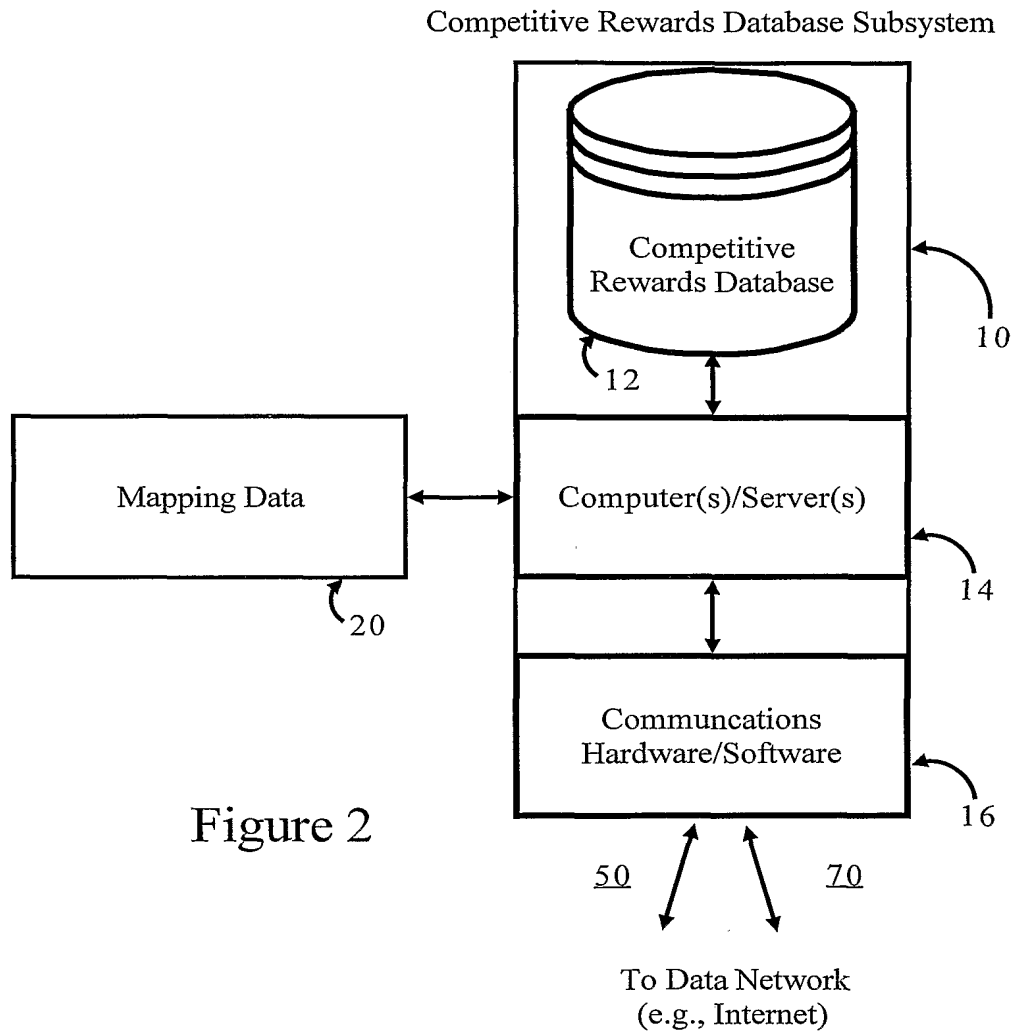


Figure 1



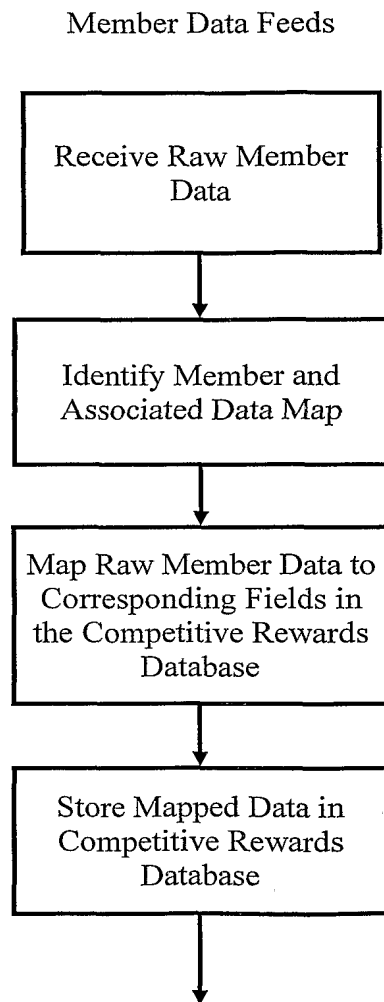


Figure 3

Data Mapping Table (e.g., one per Member)

Raw Data Element	Locations (bytes)	Database Element	Locations (bytes)
First Name	01-20	FName	61-80
Middle Name	21-40	MName	81-100
Last Name	41-80	LName	101-120
SS #	81-90	Employee ID	121-130
Position	91-120	Job_Code	01-10
Salary	121-140	Salary	11-40
Vacation (weeks)	141-150	VacTime	41-50
Sick Days (days)	150-160	SickTime	51-60
....			

Figure 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/26202

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 7/00, 17/00, 17/30, 17/60

US CL : 707/1, 4, 10, 101, 102; 705/1, 7, 8, 11

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 707/1, 4, 10, 101, 102; 705/1, 7, 8, 11

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,055,511 A (LUEBBERING et al.) 25 April 2000 (25.08.2000), whole document	1-22
X	US 5,819,231 A (TREMAINE) 06 October 1998 (06.10.1998), columns 1-2	1-22
X	US 5,600,554 A (WILLIAMS) 04 February 1997 (04.02.1997), Columns 1-3	1-22



Further documents are listed in the continuation of Box C.



See patent family annex.

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"T"

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"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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